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Palynology as a tool for the knowledge on the millennial human impact and land management in the central Mediterranean

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Ancient land management is inherited and at the base of the current landscapes and must be known to facilitate a sustainable land development for the future. Understanding past land-use systems is helpful for evaluating the current and future state of both biological and physical environments, and for disentangling the role of people in shaping current landscapes. Many different perspectives are involved in reconstructing the cultural impact on the environment. Palynology has great potentiality for environmental and palaeoethnobotanical purposes, with the study of high-resolution sequences formed under natural and anthropic (cultural) forces. Pollen data are fruitfully used to reconstruct land transformations in a diachronic palaeoecological perspective. For example, palynological records from central Mediterranean archaeological sites showed evidence of land uses and evolution of agrarian systems from Neolithic to Bronze Age, allowing a comparative view of the long-term changes in the land footprint of ancient Mediterranean societies. In this study we report on the level of detail on land management provided by palynological research from archaeological sites of Greek Basilicata (south Italy) and Roman Tuscany (central Italy). The local land use types and different management strategies inferred from palynology provide an important contribution to the knowledge of land development and implications for a sustainable soil management in these regions.